# TANGANA, A NEW SPIDER GENUS FROM AUSTRALIA (AMAUROBIOIDEA: AMPHINECTIDAE: TASMARUBRIINAE) 

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> Six species of Tangana gen. nov. are deseribed. They are T. grecni (type speeies), T. collina, T. mppartlan, Ta acuta and T. clarkei all from Tasmania, the island state off the southeast coast of Australia and T. harveyi from Vietoria, mainland Australia. They are placed with Tasmarubrius and Tasmabrochus in the subfamily Tasmarubriinac. I Amaurobioidea, Amphinectidae, Tangana, new genus, Australia.

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The Tasmarubriinae was diagnosed and described by Davies (2002). Like the other genera, Tangana spp. are large ( 8.0 or longer) ecribellates found in small retreats under logs or roeks. Some speeies were sympatric, even found in the same pitfall sample. The only modification from the deseription (loc. eit.) coneerns the eurvature of the eye rows - viewed from above the anterior row is slightly reeurved, the posterior row straight to slightly procurved (Fig.ID). It is thought that the broad embolus conveys not only the sperm duct but also the duct carrying the acellular glandular secretion that plugs the female gonopores (Suhm, Thaler \& Alberti, 1996).

## MATERIAL AND METHODS

All but one of the following taxa were collected from sites in Tasmania, the exception being a single female from Vietoria. Much of the material, comprising about 50 vials from Maggs Mt, NW Tasmania was colleeted by R.H. Green. To avoid repetition in listing these, after the first record the collector's name and locality name are omitted. Pitfalls (PF) were the main trapping method, with some hand-collecting. Notation of spines follows Platniek \& Shadab (1975). The left male palp is deseribed and illustrated. Measurements are in millimetres. The epigyna vary little between speeies thus there is an emphasis on male characters and males only are used in the key.
ABBREVIATIONS. Museums: AM, Australian Muscum. Sydney; QM, Queensland Muscum, Brisbane; QVM, Queen Vietoria Museum, Launceston; SAM, South Australian Museum, Adelaide; TM, Tasmanian Muscum and Art Gallery, Hobart; WAM, West Australian Museum, Perth. Morphology: The usual
abbreviations are used for body measurements and eyes. MA, median apophysis; RTA, retrolateral tibial apophysis. Other abbreviations on illustrations are explained in the text or in the legends.

## SYSTEMATICS

Tangana gen. nov.
TYPE SPECIES. T. greeni sp. nov.
ETYMOLOGY. From the Aboriginal 'tangana', meaning spider in the Tasmanian language.
DIAGNOSIS. Males differ from other tasmarubriines (Tasmarubrius and Tasmabrochus) in lacking a large fixed prolateral tegular apophysis and in having a terminally branehed median apophysis. Lateral teeth are present on epigynum. Spines on both male and female tarsi III and IV, smaller than those on other leg segments and not present in other tasmarubriines.
DESCRIPTION. Large, 3-elawed eeribellates with genieulate cheliecrae, 2 retromarginal and 2 promarginal cheliecral teeth with an intermediate row of tiny thin dentieles. Preening eombs on distal metatarsi I (a few tines), II, III and IV. Short thiek embolus, small membraneous conductor and movable median apophysis. A small tegular bulge may be present between embolic base and median apophysis. Small proximal paracymbium usually present. Palpal tibia with long ridge-like distal retroventral apophysis and an exeavated retrolateral apophysis with two or more processes. Epigynum with lateral teeth. Gonopores often blocked with acellular material, insemination duets heavily selerotised, large spermatheeae.

## KEY TO MALE TANGANA. SPP.

1. Small membraneous tegular apophysis present (Fig. 2C)

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2. Median apophysis trifureate (with small ventral branch)

$$
\begin{aligned}
& \text { Median apophysis bifureate (prolateral and dorsal } \\
& \text { branches only). ................. }{ }^{3}
\end{aligned}
$$

. Retrodorsal braneh of RTA rounded (Fig. 3C) . . collina
Retrodorsal branch of RTA pointed.
4
4. Retrolateral branch of RTA with proximal spur (Fig. 4C) mcpartlan
Retrolateral branch of RTA without proximal spur
clarkei
Male of T. harveyi is unknown.
Tangana greeni sp. nov.
(Figs 1, 2, 6A; Table 1)
ETYMOLOGY. In honour of Robert H. Grecn. collecior of many Tasmanian spiders.

MATERIAL. HOLOTYPE. $\delta$, Maggs Mt, NW Tasmania, $41^{\circ} 45^{\prime} \mathrm{S}, 146^{\circ} 12^{\circ} \mathrm{E}, \mathrm{PF}, 13$ June-19 Sept. 1979. R.H.Green (QVM 13:39937). PARATYPES: Tasmania. 49, same data as holotype (QVM 13:39938): $17 \delta^{\circ}$, same data (QVM 13:39939): $\delta$ (QVM 13:39940); © .9.9. same data, 15 Oct. 1979 (QVM 13:7076); $9,20^{\circ}$. juvs, 17 Oct 1979 (QVM 13:7075); $28^{3}, 10$ Oct. 1979 (QVM 13:7072): ${ }^{27}, 23$ Sept. 1981 (QVM 13:42035); 8 $\delta$, ex Poa tussock, dry sclerophyll, 14 Oct. 1980 (QVM 13:42081); 20, 17 Oct. 1979 (QVM 13:42133):2 2 , 오, (QVM 13:42137); ${ }^{\circ}$. 49, 14 Nov. 1984 (QVM 13:42238); 9.500 m from camp, dry sclcrophyll, 19 Nov. 1980 (QVM 13:42274); ठ̉, 26 Nov. 1987 (QVM 13:42427); 29, W field station. dry sclerophyll, PF, 8 Oct.-6 Nov. 1979 (QVM 13:42522); ; Arm R Camp, wattle. 5 Feb. 1980 (QVM 13:42719): ㅇ, 26 Nov. 1987 (QVM 13:42723); 8,23 Sept. 1985 (QVM 13:42838); 8 ${ }^{2}, 26$ Nov. 1987 (QVM 13:42842); ס'. 9, wet sclerophyll, 16 Oct. 1979, Forestry (QVM 13:43635); 14 ㅇ, wet sclerophyll, $800 \mathrm{~m}, 14$ Oct. 1980 (QVM 13:43638); 42 ${ }^{\circ}$, same data (QVM 13:43640); $2 \delta^{\circ}, 26$ Sept. 1989 (QVM 13:43641); 20, 7 Sept. 1987, Forestry (QVM 13:43642); $30^{\circ}, 500 \mathrm{~m}, 14$ Oct. 1980 (QVM
 Oct. 1982 (QVM 13:43634); 오, 25 Nov. 1986 (QVM 13:43652); ㅇ, 13 Oct. 1982 (QVM 13:43715); 70, 10 Oct. 1983 (QVM 13:42600); ${ }^{\circ}$, Cradle Mt. Pcncil Pinc Ck, $41^{\circ} 38^{\prime} \mathrm{S}, 145^{\circ} 54^{\prime}, 16-24$ April 1980, R.H.Green (QVM 13:43655); ㅇ, Mı Field, $42^{\circ} 41^{\prime} \mathrm{S}, 146^{\circ} 43^{\circ} \mathrm{E}, 200 \mathrm{~m}$, under $\log , 20$ May 1996, L.J. Boutin (TM J3312): $9 . \delta^{\circ}$, juv., 8 km SW Waratah, NW Tasmania, $41^{\circ} 29^{\circ} \mathrm{S}, 145^{\circ} 27^{\prime} \mathrm{E}$, 690 m . PF. 17 Aug. 3 Dee. 1990, R. Mesibov (QVM 13:23308); $?$, samc data, 680 m (QVM 13:23315); $\delta$. 670m (QVM 13:23316); ס ( (QVM 13:23322): ㅇ. (QVM 13:23323); ㅇ, Mt Barrow, NE Tasmania, $41^{\circ} 23^{\circ} \mathrm{S}$, 147² $2{ }^{\circ}$ E, 25 Apr. 1971. R.H.Grecn (QVM 13:42359); ${ }^{\circ}$, same data (QVM 13:42360); $\delta^{\delta},(\mathrm{QVM} 13: 42364): 2 \delta^{\circ} . \mathrm{nr}$ Pioneer, NE Tasmania, $41^{\circ} 03^{\prime} \mathrm{S}, 148^{\circ} 01^{\prime} \mathrm{E}$, Forestry (TM J3313); Q, NE Tasmania, Nothofagus forest nr Weldborough, $41^{\circ} 12^{\circ}$ S. $147^{\circ} 54^{\circ} \mathrm{E}$, Aug. 1993, P. Cranston,
J. Trucman (QM S55289): $2 \delta^{\circ}, 8 \mathrm{~km}$ SW Waratah, NW Tasmania, $41^{\circ} 29^{\circ} \mathrm{S}, 145^{\circ} 27^{\circ} \mathrm{E}, 680 \mathrm{~m} .20 \mathrm{Scpl}$ 1990, R. Mesibov (QVM 13:43654); \& Black Bog Ck, $870 \mathrm{~m}, 8$ July 1997. R. Mesibov (QVM 13:43656); ©', same data, 830 m (QVM 13:43657); © . Central Plateau, Butlers Rd nr Tarraleah. 700 m .20 Oct. 1992, R. Brereton (QVM 13:43658); ${ }^{3}$, same data, 18 Aug. 1992 (QVM 13:43659); O'. Central Plateau. Homes Dam ur Tarraleah, 750m, 1992 (QVM 13:43694). OTHER MATERIAL: ס, Maatsuyker 1., S Tasmania, $43^{\circ} 39^{\prime} \mathrm{S}, 146^{\circ} 16^{\prime}$ E, Site 3, 10-22 Dec. 1996, S.J. Cronin (QVM 13;23836).
DIAGNOSIS. Median apophysis trifurcate distally with spur-like prolateral,long dorsal (largely obscured by trunk) and very short retrolateral branches. Small membraneous tegular projection (apophysis) at retrolateral base of embolus. Palpal tibia with long blunt ridge-like distal retroventral apophysis; excavated retrolateral apophysis with long digitiform retrolateral and curved retrodorsal apophyses. The latter with a flat rounded centro-retrolateral projection (Figs 1C, 2D) connected by a low ridge to the retrodorsal apophysis.
DESCRIPTION. Male. CL 6.1. CW 4.8, AL 5.8, AW 3.5. Light brown cephalothorax, almost glabrous. Dorsal abdomen pale with six dark chevrons with pairs of light spots between them. Pale venter. From above posterior row of eyes straight, anterior row slightly recurved. AME smallest Ratio of AME: ALE: PME: PLE is 7:12:10:11. Chelicerae slightly geniculatc, two retromarginal and two promarginal teeth, intermediate row of tiny thin denticles (Fig. 2A,B). Labium as wide as long. Sternum a little longer than wide, $1: 0.9$. Legs 4123 (Table 1). Notation of spines. Femora: I, D111, P012, R111; 11, D111, P111, R011; I11, D111. P101, R011; IV, D110, P010, R001. Tibiae: 1, P111, V22I, R001; II, P111, V222, R001; Ill, D011, P111, V222, R111; IV. D001, P111, V222, R111. Metatarsi: 1, P001, V222, R00I; I1. D010, P111, V221, R011; 111, D101, P111, V221, R111; IV, D110, P112, V221, R112. Tarsi: II1, P011, R011; IV, P011, R0I0.

TABLE 1: T. greeni $\delta(\%)$ leg lengths.

|  | Leg 1 | Leg 11 | Leg III | Leg IV |
| :--- | :---: | :---: | :---: | :---: |
| Femur | $6.3(5.4)$ | $6.0(4.7)$ | $5.6(4.5)$ | $6.4(5.8)$ |
|  <br> Tibia | $8.1(6.8)$ | $7.2(6.2)$ | $6.7(5.4)$ | $8.1(6.8)$ |
| Metalarsus | $5.8(4.4)$ | $5.6(4.3)$ | $5.8(4.2)$ | $8.2(6.1)$ |
| Tarsus | $3.9(2.8)$ | $3.6(2.6)$ | $3.1(2.1)$ | $3.5(2.6)$ |
| Tolal | $24.1(19.4)$ | $22.4(17.8)$ | $21.2(16.2)$ | $26.2(21.3)$ |



FIG. 1.A-F, Tangana greeni sp. nov. A-C, ô palp(ventral, retrolateral, dorsal); D, dorsal carapace; E-F, epigynum (ventral, dorsal). cp = central process of RTA; rda = retrodorsal apophysis; rla $=$ retrolateral apophysis; rva $=$ retroventral apophysis of tibia.
$\delta$ palp (Figs 1A-C, 2C,D). Cymbium with bulge on retrolateral cdgc, narrow neck region with small rounded proxinal projection (paracymbium). Thick cmbolus, small membraneous conductor, short terminally trifurcate median apophysis and small blunt membrancous tegular projection prolateral to it. Tibia with distal retroventral apophysis and cxcavated retrolatcral
apophysis consisting of digitiform retrolateral process and curved retrodorsal apophysis. The latter with a rounded central process connected by a low ridge to the blunt retrodorsal apophysis.
Males varicd in length from 9.2-11.5.
Female. CL 5.8, CW 4.0, AL 5.3, AW 3.4. Similar pattern to male. Ratio of AME: ALE: PME: PLE is $7: 10: 9: 10$. Legs 4123 (Tablel). Notation of


FIG. 2. A-D, Tangana greeni sp. nov. A,B, chelicera; C.D. ठ́ palp (ventral, retrolateral). $\mathrm{c}=$ conductor; $\mathrm{e}=$ embolus; ma = median apophysis; rla = retrolateral apophysis of RTA; rva = retroventral apophysis; ta = tegular apophysis.
spines. Femora: 1, D110, P011, R011; 11, D111. P111, R001; 111, D111, P101, R011: IV, D111, P101, R001. Tibiae: I, P111, V222; 1I, P011, V222; 111, D101, P111, V222, R111; IV, D111. P111, V222, R111. Metatarsi: 1, P011, V221, R011; 11, P111, V221, R111; 111, D100. P111. V221, R111; IV, D110. P112, V221, R112.Tarsi: III, P010, R010; IV, P010, R011.

Epigynum (Fig. IE,F) about a fifth the length of venter. Postero-lateral gonopores leading
through heavily selerotised insemination duets to spermathecae thence by fertilisation duets to uterus. Irregular shaped plugs in some gonopores.

Females varied in length from 9.0-14.0.
DISTRIBUTION (Fig. 6A). Found over a wide area in NW Tasmania and Central Highlands region and to a lesser extent in NE Tasmania. One male from Maatsuyker 1., in the south, is not listed as a paratype.

## Tangana collina sp. nov.

(Figs 3A-E,6B)
ETYMOLOGY. From Latin 'collis', high ground.
MATERIAL. HOLOTYPE. ${ }^{*}$, Maggs Mt, NW Tasmania, $41^{\circ} 45^{\circ} \mathrm{S}, 146^{\circ} 12^{\prime} \mathrm{E}, \mathrm{PF}, 13$ June-19 Sepl. 1979, R.H. Green (QVM 13:39941). PARATYPES: Tasmania. 9, same data as holotype (QVM 13:39942); Sס ${ }^{\circ}$, same data (QVM
 Nov. 1987 (QVM 13: 42843): 28, 20 Sept. 1988 (QVM 13: 43636) ; ơ, 18 Scpt. 1984 (QVM 13: 43637): 우, 14 Nov. 1984 (QVM 13; 43644); ㅇ. 23 Fcb. 1988 (QVM 13:43645): 9,4 Feb. 1980 (QVM 13:43647): 9.22 Fcb. 1983 (QVM 13: 43648): 2ㅇ, 9 Feb. 1982 (QVM 13: 43651); ? 11 Fcb. 1987 (QVM 13: 43691 ); ㅇ. 25 Nov. 1986 (QVM 13:43692); ס', 15 June 1984 (QVM 13: 43693); $90^{\circ}$, ㅇ, 14 Oct. 1980 (QVM 13:39944); ס́, 23 Sept. 1981 (QVM 13:39945); 8. 10 Oet. 1983 (QVM 13:39946): © . Maggs ML. Amm R., Camp, wattle, 7 Scpt. 1987, Forestry, (QVM 13:39947); 20, Cradle Mountain, Pencil Pine Creek, $41^{\circ} 38^{\circ} \mathrm{S}, 145^{\circ} 54^{\circ} \mathrm{E}, 16-24$ Apr. 1980, R.H.Green (QVM 13:39948); 9 , Upper Natone Forest Reserve, $41^{\circ} 14^{\prime} \mathrm{S}, 145^{\circ} 53^{\circ} \mathrm{E}$, under $\log , 6$ June 1989 , J.L. Robinson (TM J2825); ㅎ, along Obsidian Ck, Savage R.,W Tasmania, $41^{\circ} 35^{\circ} \mathrm{S}, 145^{\circ} 08^{\prime} \mathrm{E}, 6$ Aug. 1974, R. Mesibov (TM J102).

D1AGNOSIS. A larger spider than T. greeni. o palp with flange-shaped paracymbium (Fig. 3B). MA terminally bifurcate, lacking the retrolateral branch. Without tegular projection. Palpal tibia with ridge-like retroventral apophysis, excavated RTA with a rounded retrolateral and curved retrodorsal branch, lacking the central process. Gonopores slit-like.

DESCRIPTION. Male. CL 7.3, CW 5.3, AL 6.7, AW 3.7. Similar colour and pattern to D. greeni. Ratio of AME; ALE: PME: PLE is 9; 12:12:14. Legs 4123. I, 26.3; 11, 24.0; 111, 22.7; IV, 29.9. Notation of spines. Femora: 1, D111, P011, R011: 11, D111, P111, R011; 111, D111, P111, R021; 1V, D111, P101, R011. Tibiac: 1, P111, V222, R111; 11, P111, V 222, R111: I11, D111, P111, V222, R111; IV, D111, P111, V222, R111. Metatarsi: 1, P111, V221, R011; II, P011, V 221, R111; III, D110, P112, V $221, \mathrm{R} 112$; IV, D110, Pl12, V 221, R112. Tarsi: III, P010, R $010 ; 1 \mathrm{~V}$, P001,R011.
o palp (Fig. 3A-C). Cymbium with bulge on retrolateral edgc, narrow neck region and proximal paracymbium. Thick cmbolus, membraneous conductor, bifurcate MA with prolateral and dorsal branches only. Tibia with blunt retroventral apophysis, excavated RTA with rounded retrolateral and curved retrodorsal branches.

Males varied in length from 11.4 - 14.0
Female. CL 7.9, CW 5.5, AL 8.8, AW 5.4. Ratio of AME: ALE: PME: PLE is $9: 12: 11: 12$. Legs 4123. 1, 23.3: 11, 20.6; 111, 20.4;1V, 26.4. Notation of spines. Femora: 1, D111, P001, R011;11, D111, Pl11, R011; 111, D111, R012; 1V, D111, P011, R011. Tibiac: 1, P111, V 222; II, P111, V 222; 111, D111, P111, V222, R111; IV, D111, P111, V222, R111. Metatarsi: 1, P011, V221, R011; 11, P111, V221, R011: 111, D100, P111, V221, R111; IV, D110, P112, V221, R112.Tarsi:IlI, P011, R011; IV, POII, R011.

Epigynum (Fig. 3D,E ) about an eighth the length of venter. Slit-like gonopores.

Females ranged in length from 13.5-20.0.
DISTRIBUTION (Fig. 6B). Sympatric with $T$. greeni at Maggs Mt, NW Tasmania and found further west.

Tangana mcpartlan sp. nov.
(Figs 4A-E, 6B)
ETYMOLOGY. From the type locality, McPartlan Pass, SW Tasmania.

MATERIAL. HOLOTYPE: © , McPartlan Pass, SW Tasmania, $42^{\circ} 51^{\circ} \mathrm{S}, 146^{\circ} 11^{\circ} \mathrm{E}, 200 \mathrm{~m}$, PF, Mar. 1999 , M.Driessen (QM S55290). PARATYPES: Tasmania. ㅇ, same data as holotype (QM S55291): I, same data, 12 Mar. 1999 (QM S55292); \%', same dala, 21 Mar. 2001, (QM S55318).

DIAGNOSIS. Large spider. MA bifurcate distally with long prolateral and dorsal branches, lacking retrolateral branch. Tcgular projection absent. Palpal tibia with ridge-like retroventral apophysis, excavated RTA with a rounded digitiform retrolateral branch with small proximal process (Fig. 4C); curved retrodorsal branch with flat rounded proccss curving to dorsal spur.
DESCRIPTION. Male. CL 7.1, CW 5.4, AL 6.3, AW 3.8. Red brown cephalothorax. Abdomen brown with six paircd pale spots. Labium longer than wide $1: 0.7$. Sternum longer than wide $1: 0.9$. Ratio of AME: ALE: PME: PLE is 8:9:9:10. Lcgs 4123;1, 24.5; 11, 22.8; 111, 22.3; 1V, 28.1. Notation of spines. Femora:1, D111, P011, R022; 11, D111, P112, R012; 111, D111, P111, R021; IV, D111, Plll, R011. Patcllae: $111, \mathrm{D} 001 ;$ IV, D001. Tibiac: 1, Pll1, V222, R111; 11, P111, V222, R111. 111, D111, P111,V222, R111; 1V, D111, P111, V222, R111. Mctatarsi: I, D110, Pl12, V221, R112; 11, D111, P112, V221, R112; 111, D111, P111, V221, R112; IV, D110, P212, V221, R212. Tarsi: 111, P010, R010; IV, P011, R011.


FIG. 3. A-E, Tangana collina sp. nov. A-C, ơ palp (ventral, retrolateral,dorsal); D,E, epigynum (ventral, dorsal), $\mathrm{fd}=$ fertilisation duct; $\mathrm{pc}=$ paracymbium; $\mathrm{sp}=$ spermathecae.

ס̃ palp (Fig. 4A-C). Cymbium with bulge on retrolateral edge, narrow neck region with small rounded paracymbium. Thick embolus, small membraneous conductor, MA terminally bifurcate. Tibia with ridge-like retroventral apophysis, excavated RTA.
Female. CL 8.1, CW 5.4, AL 7.3, AW4.5. Coloration similar to male. Ratio of AME: ALE: PME: PLE is 7:9:10:11. Notation of spines. Femora: 1, D111, P011, R011; 11, D111, P111, R111; 111, D111, P111, R111; IV, D111, P111, R011. Patellae: I11, D001; 1V, D001. Tibiae: 1, P011, V222; 11, P111, V222; 111, D111, P111. V222, R111; 1V, D111, P111, V222, R111. Metatarsi: I, P111, V221, R001; 11, P012, V221, R012; I11, D100, P112, V221, R112; IV, D101,

P112, V221, R112. Tarsi: 111, P010, R010; 1V, P010, R010.

Epigynum (Fig. 4D,E) about a sixth the length of venter. Curved, pointed lateral teeth.

Other $\$$ CL 7.8, CW 5.3, AL 9.7, AW 6.3.
DISTRIBUTION (Fig. 6B). From McPartlan Pass, SW Tasmania.

Tangana acuta sp. nov.
(Figs 5A-C, 6B)
ETYMOLOGY. From the Latin 'acutus', pointed referring to the sharply pointed tip of the embolus.
MATERIAL. HOLOTYPE: ${ }^{\star}$, nr Pioneer, NE Tasmania, $41^{\circ} 03^{\circ} \mathrm{S}, 148^{\circ} 01^{\prime} \mathrm{E}, \mathrm{PF}$, Forestry (TM J3314). PARATYPES: $2 \delta^{\circ}$, same data as holotype (TM J3315).


FIG. 4. A-E, Tangana mepartlan sp. nov. A-C, ôpalp (ventral, retrolateral, dorsal); D,E, epigynum (ventral, dorsal). $\mathrm{It}=$ lateral teeth.

DIAGNOSIS. Smaller spider with flange-shaped paraeymbium. Short MA, trifureate distally. Selerotised tegular area at base of embolus. Palpal tibia with retrodorsal apophysis terminating in a long sinuous spur (Fig. 5B).

DESCRIPTION. Male. CL 5.7, CW 3.7, AL 4.4, AW 2.9. Red brown eephalothorax, pale abdomen. Ratio of AME: ALE: PME: PLE is 7:10:8;11. Legs 4123. I, 20.3; II, 18.3; 1I1, 16.7; 1V, 22.9

Notation of spines. Femora: 1, D1I0, P011, R011; II, D111, P012, R011; 111, D11I, P011, R011: IV, D111, P01I, R011. Patellae: III, D001. Tibiae: I, P001,V222; 1I, P111, V222; 111, D11I, P111, V222, R111; IV, D111, P11I, V222, RIII.

Metatarsi: I, P010, V222, R010; II, P011, V221, R011; I11, D110, P112, V221, R112; 1V, D111, P112, V221, R112. Tarsi: 11I, R001; IV, R011.
ot palp (Fig. 5A-C). Small flange-shaped paraeymbium. MA trifureate distally with prolateral, dorsal and small ventral braneh. Tibia with distal retroventral apophysis and excavated RTA with long digitiform retrolateral braneh, small central proeess and curved retrodorsal apophysis terminating in long sinuous spur.

Other males were slightly smaller, 8.8 and 9.3.
Female unknown.
DISTRIBUTION (Fig. 6B). Known only from one sample colleeted near Pioneer, NE Tasmania.


FIG 5. A-H, Tangana spp. nov. A-C, T. acuta, ô palp (ventral, retrolateral, dorsal). D-F, T. clarkei, ơ palp (ventral, retrolateral, dorsal). G, H, T. harveyi, epigynum (ventral, dorsal).

Tangana clarkei sp. nov.
(Figs 5D-F, 6B)
ETYMOLOGY. In honour of Arthur Clarke, speliologist.
MATERIAL. HOLOTYPE: ${ }^{\prime \prime}$, Exit Cave, $43^{\circ} 29^{\prime}$ S, $146^{\circ} 51^{\prime}$ E, 7 Mar. 1997, A.Clarke (TM J3259). OTHER MATERIAL: juvenile, same data as holotype (TM J3316).

DIAGNOSIS. Large cave spider with very long Icgs. MA bifurcate distally. Retrodorsal branch of RTA bluntly pointed.

DESCRIPTION. Male. CL 8.7, CW 6.1, AL 7.9, AW 5.5. Coloration similar to other species but without pattern on abdomen. Posterior eye row straight, anterior row slightly recurved. Ratio of

AME: ALE: PME: PLE is $8: 10: 10: 11$. Labium longer than wide, 1: 0.8 . Sternum longer than wide, 1: 0.8. Legs 4123.1,30.9; I1, 29.3; III, 28.6; 1V, 38.3. Notation of spines. Femora: 1, D111, P011, R021; I1, D111, P102, R011; 111, D111, P111, R111; IV, DI11, P1I1, R111. Patellae: 111, D001; 1V, D001. Tibiae: 1, P111, V222, R011; II, P111, V222, R111; 111. P111, V222, R111; IV, D111, P011, V222, R111. Metatarsi: I, D010, P111, V221, R112; 11, D110, P111, V222, R111; 111, D110, P112, V221, R112; IV, D100, Pl12, V221, R112. Tarsi: Il1, P001, R001; 1V, P001, V003, R00I.
o palp (Fig. 5D-F).Without paracymbium. MA with large dorsal and small prolateral branches. RTA with short rounded retrolateral and pointed retrodorsal apophyses.

Female unknown.
DISTRIBUTION. (Fig. 6B). Cave spider from SW Tasmania.

## Tangana harveyi sp. nov. (Figs 5G,H, 6A)

ETYMOLOGY. In honour of Mark Harvey, one of the eollectors of this spider from Vietoria.
MATERIAL. HOLOTYPE. ㅇ, The Beeches, Vietoria, $37^{\circ} 28^{\prime}$ S, $145^{\circ} 49^{\circ}$ E, 25 Mar.I991, Mark S. Harvey, M.E. Blosfelds (WAM 98/2046). OTHER MATERIAL: 2 juveniles, same data as holotype (WAM 98/2047-8).
D1AGNOSIS. Epigynal spermathecae more widely separated than in other species.
DESCRIPTION. Female. CL 7.2, CW 4.8, AL 6.0, AW 4.0 (abdomen shrunken). Red-brown carapace; dark cardial area and five chevrons with accompanying pale spots on abdomen; pale venter. From above, posterior eye row straight, anterior row slightly recurved. Ratio of AME: ALE: PME: PLE is 8: 11: 9: 12. Labium slightly longer than wide 1: 0.9 . Sternum longer than wide 1: 0.8. Legs 4123. 1, 21.2; 11, 19.7; 111, 17.7; 1V, 23.2. Notation of spines. Femora: 1, DI11, P002, R011; 1I, D111, P111, R100; 111, D111, P101, R011; IV, D111, P101, R001. Tibiac: I, P011, V222; 11, P111, V222; 111, D111, P111, V212, R111; 1V, D111, P111, V212, R1I1. Metatarsi: I, P101, V221, R001; 11, P011, V221, R011; 1II, D110, P112, V221, R112; 1V, D110, P112, V221, R112. Tarsi: 111, P011, R001; IV, P001, R001.

Epigynum (Fig. 5G,H). Spermathceae more widely separated than in other species.


FIG. 6. A,B, Maps showing distribution of Tangana spp, in Tasmania and Victoria.

Male unknown.
DISTRIBUTION (Fig. 6A). One female and two juveniles from southern Victoria. This is the first record of a tasmarubriine from mainland Australia.

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